



ZRTI Phase-1 Operation Project

SUDARSHAN BHAT

IRTS (P) 2017

TOPICS FOR PRESENTATION

- Limits of Speed while running through stations
- Train shunting limits of speed over facing point and trailing point

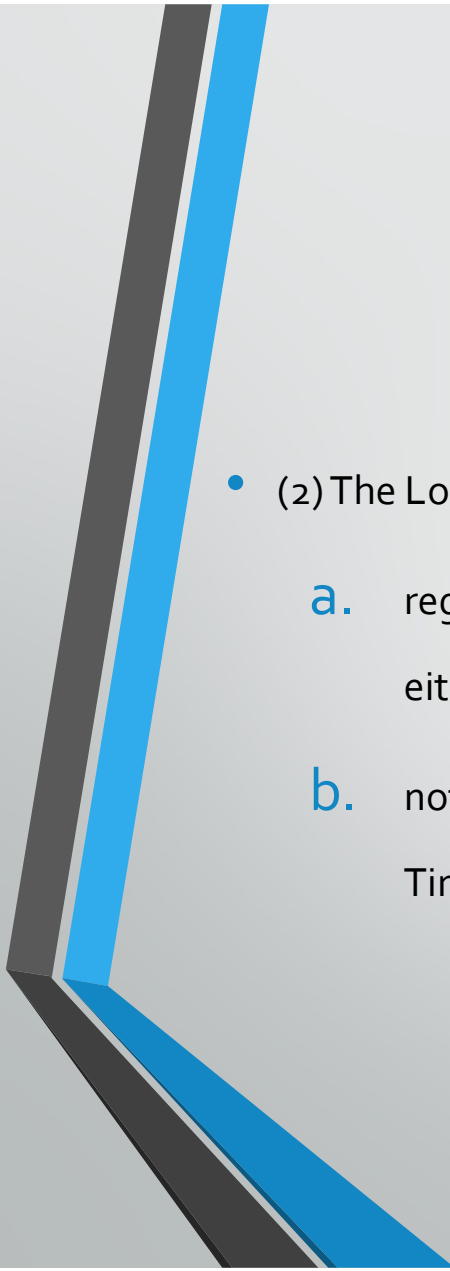
What all covered?

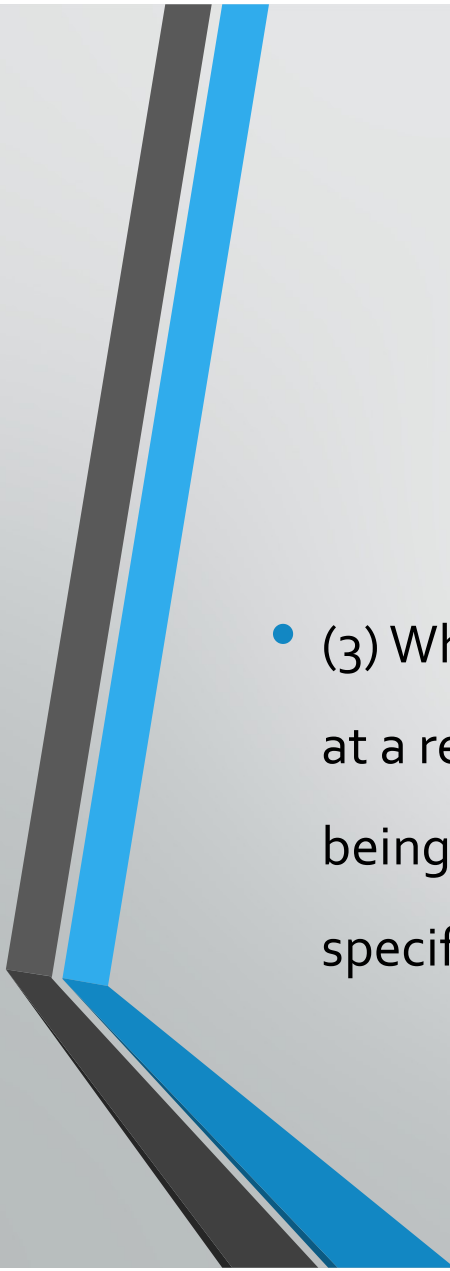
- Limits of Speed Generally (4.08)
- Limits of Speed while running through stations (4.11)
- Limits of Speed over Facing points (4.10)
- Control of Shunting (5.13)
- Train shunting limits of speed (SR 5.13 (13))

LIMITS OF SPEED GENERALLY (4.08)

1) -


- a. Every train shall be run on each section of the railway within the limits of speed sanctioned for that section by approved special instructions.
- b. The sectional speed sanctioned and permanent speed restrictions shall be shown in the Working Time Table.
- c. The Loco Pilot shall observe the sanctioned speed except when either one speedometers in case of electric loco or two speedometers in case of other locomotives are defective. In such cases of defective speedometers both the maximum permissible speed and booked speed of coaching trains shall be reduced by ten percent from the speed otherwise permissible.

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- (2) The Loco Pilot shall
 - a. regulate and control the running of the trains according to the Working Time Table, so as to avoid either excessive speed or loss of time and
 - b. not make up between any two stations more time than is allowed in this behalf in the Working Time Table and shall also observe all speed restrictions.

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- (3) When it is necessary to indicate to the Loco Pilot where trains are to run at a restricted speed or where trains have to come to a stop due to the line being under repairs or due to any other obstruction, action shall be taken as specified in Rule 15.09. [Showing of signals]

Limit of speed while running through stations (Rule 4.11)

- No train shall run through an interlocked station at a speed **exceeding 50 Kilometres an hour**, or such less speed as may be prescribed by approved special instructions, unless the line on which the train is to run has been **isolated** from all other lines by the setting of points or other approved means and interlocking is such as to maintain this condition during the passage of the train.

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- In every case in which trains are permitted to run through **on non-isolated line**,
 - all shunting shall be stopped and
 - no vehicle unattached to an engine or not properly secured in accordance with Rule 5.23 [Securing of vehicles at station] may be kept standing on a connected line, which is not isolated from the through line.

Continued...

- SR 4.11 (1) Trains arranged to run through the station without stopping shall, as far as possible always do so on the straight line.
- SR 4.11 (2) **When the straight line is blocked**, the following conditions will apply –
 - A.** No train must be allowed to run through over a loop line having **turn outs 1 in 8 ½** (i.e. less than 1 in 12) in the facing and trailing direction.
 - B.** Trains may be permitted to run through over loop line having **turn outs 1 in 12** and flatter or provided with symmetrical split at a **restricted speed of 15 Kmph**.
 - C.** When a train is permitted to run through over loop line as per SR 4.11(2)(B) above, the run through train must be **stopped at the first Stop signal** if the station is not provided with bracketed Home signal for each line.
 - D.** All restrictions wherever applicable at a station must be **specifically embodied in the SWRs**.

Exception:

- i. A passenger train **should not** be received over a loop line having **turn outs 1 in 8 ½** (i.e. less than 1 in 12) in the facing and trailing direction. **In case of an emergency** if it becomes absolutely necessary to receive a passenger train on such a loop, the train should be **first stopped at the First Stop Signal** and **then piloted** into the station. The speed of the train **must not exceed 10 Kmph while entering or leaving the loop.**
- ii. **On the Broad Gauge** where **1 in 8 ½ turnouts** have been provided with curved switches, all trains including passenger trains are permitted to run through at a **restricted speed of 15 Kmph.**

When it is necessary for a non stopping train to be run through over the loop line, the Authority to Proceed must be handed over to the Loco Pilot opposite the Station Office.

Train shunting limits of speed over facing point and trailing point

Limits of Speed over facing points (4.10)

- 1) The speed of trains over non-interlocked facing points **shall not exceed 15 kilometres** an hour in any circumstances and the speed over turn-outs and cross-overs shall not exceed 15 kilometres an hour unless otherwise prescribed by approved special instructions, which may permit a higher speed.
- 2) Subject to the provisions of sub-rule (1), a train may run over interlocked facing points at such speed **as may be permitted by the standard of interlocking.**

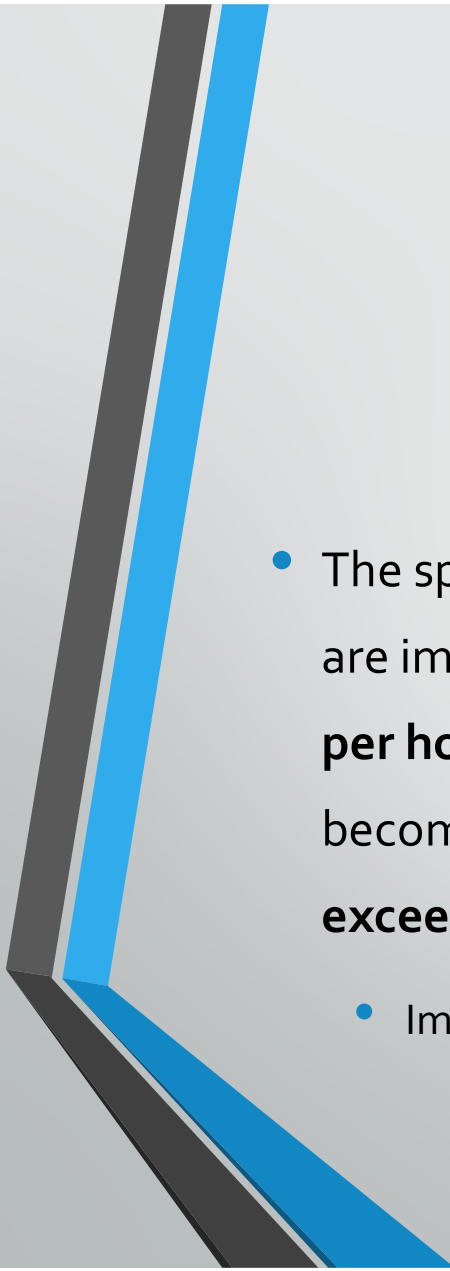
Control of Shunting (5.13)

- 1) Shunting operations shall be controlled by fixed signals or hand signals or by verbal directions.
- 2) The Loco Pilot shall not, however, depend entirely on signals and shall always be vigilant and cautious.
- 3) The speed during shunting operations shall not exceed 15 kilometres an hour unless otherwise authorised by special instructions.

- SR 5.13 (11) When a part or the whole of a passenger, mixed or goods train is being shunted all the points over which movements are made shall be correctly set and facing points locked before allowing a shunting move over the points. The locking shall be done in the following manner:
 - A. In case of facing points provided with facing point lock, the lock lever should be pulled if interlocking permits of this being done; other wise the points may be clamped/cotter-bolted.
 - B. In case of points over which shunting moves are governed by Shunt signal which detect the points, clamping/cotter bolting of points need not be done.
 - C. In case of points which are neither provided with facing point locks nor are detected by Shunt signals, the points must be clamped/ cotter-bolted.

Train shunting limits of speed over facing point and trailing point

- **SR 5.13 (13)** The speed during shunting operations (other than hump shunting) shall not exceed **15 kilometres an hour** except during shunting of vehicles containing
 - passengers,
 - live-stock,
 - explosive,
 - dangerous and inflammable goods and
 - tank wagons,when it shall not exceed **8 kilometres an hour**.

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- The speed at which the loaded or empty BCX, BCN, BOXN, BOX and BOBS wagons are impacted singly shall be restricted to the normal walking speed of **5 kilometres per hour** but when impacting a **group of five wagons or less than five wagons** become inevitable the speed should correspond to a very slow walking speed **not exceeding 3 Kms. per hour.**
 - Impacting in group of more than five such wagons is **prohibited.**



Thank You